

Amendments to the Claims:

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

1. (Currently amended): A method for analyzing in a cell for the effect ~~on~~ expression of an expression inhibiting nucleic acid on the expression of a fusion protein, where the nucleic acid interacts with mRNA, said method employing ~~using~~ an expression construct expressing a said fusion protein ~~of~~ comprising the small enzyme donor (ED) fragment of β -galactosidase ~~with~~ joined to a polypeptide, where said expression inhibiting nucleic acid affects the activity of β -galactosidase resulting from said ED forming a functional enzyme with the large enzyme acceptor (EA) fragment of β -galactosidase, said method comprising:

maintaining a cell comprising said expression construct and said expression inhibiting nucleic acid;

providing said EA to any of said fusion protein produced in said cell to form β -galactosidase, and a β -galactosidase substrate that ~~produces~~ results in a detectable product upon β -galactosidase modification of said substrate; and

determining the activity of said functional enzyme by use of said detectable product, whereby the activity of said functional enzyme is related to said effect on expression of said fusion protein.

2. (Original): A method according to Claim 1, wherein said effect on expression is the inhibition of expression by a DNA molecule.

3. (Original): A method according to Claim 1, wherein said nucleic acid is an RNA molecule.

4. (Original): A method according to Claim 3, wherein said RNA molecule is dsRNA.
5. (Original): A method according to Claim 4, wherein said dsRNA is RNAi.
6. (Original): A method according to Claim 1 wherein said cell is grown in the presence of a candidate compound.
7. (Original): A method according to Claim 1, wherein said cell is a mammalian cell.
8. (Currently amended): A method for analyzing in a cell the effect ~~on~~ expression of an expression inhibiting RNA on the expression of a fusion protein, where the RNA interacts with mRNA, said method employing ~~using~~ an expression construct expressing a said fusion protein ~~of comprising~~ the small enzyme donor (ED) fragment of β -galactosidase ~~with joined to~~ a polypeptide, where said effect on expression affects the activity of said ED in forming a functional enzyme with the large enzyme acceptor (EA) fragment of β -galactosidase, said method comprising:
 - maintaining a cell comprising said expression construct and said expression inhibiting RNA;
 - providing said EA to any of said fusion protein produced in said cell to form β -galactosidase, and a β -galactosidase substrate that produces a detectable product upon β -galactosidase modification of said substrate; and
 - determining the activity of said functional enzyme by use of said detectable product, whereby the activity of said functional enzyme is related to said transcription in said cell.
9. (Original): A method according to Claim 8, wherein said RNA is double stranded RNA.

10. (Original): A method according to Claim 9, wherein said RNA is RNAi.
11. (Original): A method according to Claim 8, wherein said expression inhibiting RNA is added to said cell.
12. (Original): A method according to Claim 8, wherein said expression inhibiting RNA is transcribed in said cell.
13. (Original): A method according to Claim 8, wherein said substrate produces a fluorescent product.
14. (Original): A method according to Claim 8, wherein said cell is a cell line.
15. (Original): A method according to Claim 8 wherein said cell is grown in the presence of a candidate compound.
16. (Original): A method according to Claim 8, wherein said cell is lysed prior to said determining and said determining is of said lysate.
17. (Original): A method according to Claim 8 wherein said expression inhibiting RNA inhibits expression of a transcription factor.
18. (Original): A system for determining in mammalian cells the effect of an expression inhibiting dsRNA on expression of a first protein where the dsRNA interacts with mRNA, employing a fusion protein comprising a β -galactosidase enzyme donor ("ED") fused to a second protein, where said first and second proteins are related in that the level of expression of said first protein fusion protein are interrelated, said determining comprising measuring the β -galactosidase activity of said fusion protein in the presence of

an enzyme acceptor ("EA") capable of being complemented by said ED of said fusion protein to form a functionally active β -galactosidase enzyme, said system comprising:

a vector comprising a first transcriptional and translational regulatory region functional in said host cell, (2) an ED sequence encoding said ED joined to a multiple cloning site ("mcs") under the regulation of said transcriptional and translational regulatory region; the same or different vector as (1) comprising a second transcriptional regulatory region functional in said host cell and a gene encoding said inhibiting dsRNA under the regulation of said transcriptional regulatory region; (3) an enzyme acceptor protein; (4) a gene when inserted in said mcs in reading frame with said ED sequence expresses a biologically active protein and an ED capable of complementing said EA; (5) host cells in which said transcriptional and translational region is functional; and (6) substrate for said β -galactosidase enzyme that upon hydrolysis produces a detectable signal.

19. (Original): A system according to Claim 18, wherein said first and second transcriptional regulatory regions have the same transcription factors.

20. (Original): A system according to Claim 19, wherein said first and second transcriptional regulatory regions have different transcription factors.

21. (Original): A system according to Claim 18, wherein said host cell expresses EA.

22. (Original): A kit for use in a method according to Claim 1 comprising: an expression construct of the small enzyme donor fragment of β -galactosidase fused to a protein of interest, an expression inhibiting double stranded RNA for said protein of interest, and at least one of an enzyme acceptor fragment of β -galactosidase or a β -galactosidase substrate producing a detectable product.